

PROFITS FROM FARM WOODS



MONEY-MAKING EXAMPLES
from SOUTHERN FARMERS

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MANY farmers are getting a part of their yearly cash income from timber grown on their farms. In hard years, due to short crops of food or cotton, the sale of crossties, pulpwood, poles, firewood, or saw logs has kept the family from financial distress and the banks and other business institutions from closing their doors.

The growing of timber on farm land not suitable or not needed for field crops or pasture is now generally recognized as a profitable farm enterprise.

Timber will grow on the less fertile soils and does not require fertilizer or labor. It is the net profit that counts, and more and more farmers are coming to realize that wood and timber rank high as cash crops. One such farmer in North Carolina, a man 74 years old, while attending a timber-growing demonstration exclaimed, "I'm getting old enough to grasp new ideas." In the words of a Texas farmer, "Our farm problem to-day doesn't end at the barn-lot gate or at the water tap."

The right use of the ax and saw is an important part of good woods management. If managing the farm woodland successfully means anything, it means using or marketing the product wisely. Owners of timberland will be interested in the experiences of farmers who by good methods of cutting, using, and marketing, have made their woodlands profitable.

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By W. R. MATTOON

Extension Forester, Branch of Public Relations, Forest Service

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VALUE OF TYPICAL EXAMPLES

The stories included in this publication are believed to be typical of the results and money returns possible to farmers under average conditions in the various regions. There are many farmers whose market possibilities for wood products are unfavorable. However, there are many other farmers who, by a little greater effort on their part, can duplicate the experiences of the farmers here described. Although estimates of the amount of timber that can be grown and of its money value are helpful, specific examples of good practice in cutting and marketing products from the farm woods are far more informative and valuable.

Better methods of handling the woods and timberlands on the farm will result in larger, more frequent, and more profitable timber crops. Some of the products will always be needed for the upkeep of the farm homestead. The money income from logs, poles, crossties, posts, and fuel wood that can be sold as excess products, should in a greater degree than now constitute a substantial part of the net farm income. On the farm as well as elsewhere the thing that counts is the difference between the cost of production and the amount received from the sale of the product, in other words the net income.

In many of the cases cited in the following pages it will be seen that the farmers did their own cutting of the rough-timber products. They thereby gained doubly by leaving their woods in good condition to grow another crop of timber and by marketing their own labor and that of their teams or trucks, as well as their timber.

The examples of cutting and marketing timber have been obtained directly from the farmers, many by the author and some by State

extension foresters, including W. K. Williams, formerly of Arkansas and now with the Extension Service of the United States Department of Agriculture, and R. W. Graeber, of North Carolina. For their assistance due acknowledgment is hereby gratefully extended.

For further information regarding the examples which follow, address your request to the extension foresters at the colleges of agriculture or to the local agricultural county agents of the respective States or counties. Requests for information on any phase of reforestation or growing timber as a farm crop should be sent to the same agencies, your State forestry department, or the Forest Service, United States Department of Agriculture.

KINDS OF PINES

The following stories have mainly to do with pine timber. The shortleaf pine is the upland or hill shortleaf yellow pine growing in largest abundance in the piedmont and lower mountain slopes. The loblolly pine is the common old-field pine of the coastal plain and lower piedmont region; the tree and the lumber from it are often called "shortleaf." The slash pine is the "yellow slash," found only in the lower coastal plain, which yields large amounts of high-grade resin or gum. The longleaf pine is well known.

FARMER THINS PINES AT A PROFIT

Reading in the newspaper about farmers making money by thinning their pines, G. M. Hatley of Hudson, Caldwell County, N. C., decided to try it out for himself. The record which Mr. Hatley kept of his operation will prove of interest to other farmers, some of whom are even better situated to remove their "waste" wood and market it than was he. Mr. Hatley tells his story thus:

During the winter months I have a lot of idle time that I would like to use at a reasonable wage. I decided that if by thinning my timber I could make \$2 a day for my own labor and part of the time an additional \$1 per day for my team it would be better than being idle or going rabbit hunting every day.

For my first cutting I selected 1 acre of rather dense, second-growth shortleaf pine about 28 years old. The pines had reclaimed an old eroded field, stopped the gullies, and were too crowded in many places to make a good growth. Before beginning to cut I selected 320 of the thrieffiest, straightest and best-formed trees and marked them with whitewash to be left standing as seed trees for reseeding the land. All the remaining trees I cut as poles and hauled to the house. I then hired these poles sawed into stove-wood blocks, but split them myself. The result was 8 cords of stove wood, which I sold in town for \$7.50 per cord, or \$60 for the product cut in improving the stand on 1 acre.

What did I make out of the job? I allowed myself 75 cents a cord for cutting in the woods and 50 cents a cord for hauling to the house. The only hired labor was for splitting the blocks which cost me \$1 a cord or a total of \$8. My own labor for splitting was credited at the same price of \$1 per cord and for hauling to market \$2 a cord. Thus I got \$4.25 a cord for my labor, or \$34. But what surprised me most was the \$2.25 per cord stumpage or value of the standing trees, amounting to \$18 an acre—enough to pay taxes and interest on the land for several years. My money return on the acre thus amounted to \$52. In the future I intend to cut all my wood supply on this basis and market wood as a means of increasing my farm income during the winter months.

It should be noted that by doing his own selecting and cutting of trees Mr. Hatley was able to remove as his crop the crippled and stunted trees, leaving a fine stand of 320 trees including the best-formed and thriftiest trees on the land. These trees, shown in Figure 1, will make him a crop of high-grade and valuable timber, worth much more than the crop which he cut and profitably sold.

FARMER GROWS A TIMBER CROP—IT PAYS

Phillip Nabholz, a farmer living near Conway, in central Arkansas, furnishes an example of good management of his woods. An improvement cutting, made progressively each year on about 10 acres of his young hardwood timber, has provided him an annual income, averaging about \$130. "My timber," Mr. Nabholz stated, "furnishes me a winter cash crop." He and his boys get out their



FIGURE 1.—A money return of \$52 an acre was received from the trees cut in improving this stand. This consisted in the stumpage value of the trees plus the owner's labor in harvesting them. The largest and best trees—320 on an acre—have been left for another and more valuable crop

cordwood in the winter months when they are not busy with field crops. The wood is mostly sold in Conway, county seat of Faulkner County, to residents and bakeries. A portion of the wood is sold to a local gin in exchange for ginning the Nabholz cotton crop.

Mr. Nabholz learned the principles of timber growing at a very early age when he was on his father's farm in Switzerland. He states that his father taught him the value of trees for conserving the soil, holding back landslides, and obtaining ready money by providing the townfolks with winter wood. While in the woods his father would explain why he cut this tree or left that one to grow. This early woods training Mr. Nabholz is putting into practice in a successful manner on his 160-acre farm near Conway.

His 80 acres of timberland had little value when he bought the place 17 years ago. The tree growth it had then was called a "scrub" growth as it had been repeatedly burned. Realizing that fire prevention was of first importance, he started protecting his woods. In a few years young hardwood timber of promising value

developed. With the trees coming in too thick, it was necessary for him to thin them, and it is this work of thinning young trees which is making him a nice profit to-day. Recently, Mr. Nabholz thinned out 10 acres from which he got 42 cords of wood in all, or 10 cords for home use, 15 cords for the local cotton gin, and 17 cords for the town bakery.

In cutting his hardwoods, only an amount equal to the yearly growth on his whole woodland is being taken out by the owner.



FIGURE 2.—Thrifty, straight young timber left after logging the largest trees, in the woods of Robert P. White, Clarke County, Ga. The tops and ugly trees are being worked into firewood.

In other words, his cutting program provides for a perpetual supply of wood. In six years, he stated, he will be caught up with his thinning operations, and then for several years only firewood for home use will be taken out. If the time ever comes when his wood is not needed for fuel, he believes that it will not affect his timber-growing program as he will then harvest his trees for crossties, for which there is a good market.

Mr. Nabholz's nine children are learning the principles of forestry as he learned them in the "old country." They are all enthusiastic and realize its value. His timber is increasing the sale value of his farm. Besides this, the leaves are raked up and used for bedding stock to increase the stable manure. As the forest tract lies west of the farmstead it affords shelter for the home and for livestock from the cold winds of winter.

A FARMER'S TIMBER PROPHECY COMES TRUE

Said Robert P. White, a substantial farmer of the red clay hills in the piedmont region of Clarke County, in upper Georgia:

There has been little profit in cotton farming since 1920. Our timber has kept my brother, sister, and myself from bankruptcy. Dad used to say to us many times that if we'd take care of the timber and keep fires out it would be the best paying part of the farm. A neighbor who was struggling along growing cotton on hillside land was advised by my father many years ago to give it up and let the land grow timber. My father was right as the last decade has fully shown.

The boll weevil came in 1921 and became worse in 1922 and 1923. Then the very dry season and crop failures of 1924 and 1925 put us back where we had

to turn to our timber to make a living and keep our farm from passing into the hands of the bankers.

Timber turned the trick for Robert White and for his brother and sister. Their farm contained about a thousand acres of thrifty shortleaf pine and hardwood timber. Except for occasional small railroad fires, the timber had grown under protection. A windstorm in 1919 mowed down 68 large pines and a small sawmill was brought in to utilize them. This, the first logging, was followed each year until the big drought in 1924-25 by small sawmill contracts, cutting only selected ripe pines, oaks, and poplars. The White woods became widely known as an example of good forest management. (Fig. 2.) They were cited in the State legislature in the campaign of 1925 and 1926 for a State forestry organization.

The hard years of 1924-25 proved an acid test of the belief and prophecy of the father, John F. White, of White Hall, that timber



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FIGURE 3.—During the winter season all the tenants work in the woods or at the woodpile and thus support themselves and their families

growing would prove to be a good investment. Since that time Robert White and his sister have been able to keep their farms by means of the income from the timber. The woods have yielded from \$5,000 to \$8,000 yearly. The timber has been sold for "so much a thousand feet" of lumber measured in the stack. But there is much more to the story, for all the tenants on the farm have had winter work, cutting crippled and diseased trees and tops of the logged trees into stove wood. This has kept them out of debt and been the means of a fair living for their families numbering about 60 people. (Fig. 3.)

The men who cut the trees are paid by the cord for delivering the wood at a central yard at the farmstead. The other men, including the sawyers and splitters, are paid by the day. This fur-

nishes employment for about five months. The stove wood is hauled in special wagons divided into four sections and sold in Athens, the county seat, for \$1 a section. All the refuse wood is thus cleaned up from the woodland, greatly reducing the fire risk. During the coldest part of the year other farmers from the locality come and get woods work.

Timber thus tided over many families during a decade of critical years when many farmers and some banks became insolvent. For many years the farm will likely be a going institution because of good judgment and foresight exercised in handling the timber, in the words of Robert White, as a savings account.



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FIGURE 4.—A tree that grew in an old field after J. M. Stokes (shown in the view) grew to manhood

For the timber in the tree the cutter paid the farmer 10 cents each for the four larger ties and 5 cents each for the four smaller ties, or a total of 60 cents. The tree measured 15 inches across the stump and was 40 years old.

LOBLOLLY PINE

"I've plowed corn here many a time up until I was nearly grown, and I'm not an old man now," said J. M. Stokes, of Kemper County Miss., as he stood beside a large loblolly pine. The tree, shown in Figure 4, measured 34 inches in diameter at breast height and was grown during the past 40 years. It had ample room to develop, and the soil conditions in the old field were very favorable.

LOUISIANA FARMER "SOWS AND REAPS" TIMBER CROP

Quincey Brumfield, a farmer of Washington Parish, La., sowed $4\frac{1}{2}$ acres of land with seed of loblolly pine and a small amount of sweetgum. He then protected the young timber growth and allowed

STORIES OF TWO MISSISSIPPI TREES

SWEETGUM

For many years until recently, sap sweetgum trees were of no value. They were not even wanted for firewood. The railroads are now buying sweetgum crossties in quantities for use after creosoting treatment. Because the wood fibers are interlocked the wood does not check much after being treated. There is no better material than peeled round sweetgum for treated fence posts or poles.

A sweetgum tree grew along a small branch in Simpson County, Miss., where it was considered a worthless sprout. It was of some value, however, for it held the bank from washing and its shade conserved the soil moisture. Later, the tree was cut, and it made eight crossties.

it to develop. Twenty-six years later, in January, 1927, needing money to tide him over a hard year, he harvested and sold his crop for \$714.

He found that he could sell the larger trees for crossties and use the tops of these same trees, along with the smaller and immature trees, as pulpwood. However, he left some of the trees, in the true spirit of reforestation, to make seed for a later crop. When he had finished cutting he found that he had 430 ties, which he sold for 30 cents each, netting \$129. He also sold 130 cords of pulpwood for \$4.50 per cord, or \$585. The ties and pulpwood together brought Mr. Brumfield \$714, delivered at the station. The farmer did his own cutting and hauling at odd times. Counting the income from the labor as \$385 leaves the value of the timber on the stump as \$329, a fair value, and the average money returns from growing timber during the 26-year period as \$73.11 per acre.

The State extension forester said:

Almost any farmer can do as well if he will take care that his young pines are growing closely enough to produce good, straight growth. The 4½-acre stand of timber was no exception, and in fact the trees were rather scattered in places. But let no one try to duplicate these profits who allows his young timber to burn over annually.

SELECTIVE CUTTING PROFITABLE

F. A. White, a farmer living near Lewisville, Winston County, in east-central Mississippi, has handled his pine woodland intelligently and made repeated cuttings, at intervals of about eight years, with good money returns.

Good grade of pine logs were worth \$12 a thousand feet delivered on the "dummy" logging railroad. He marked his mature and overcrowded trees for cutting. Then he hired a reliable man to cut and deliver the logs to the railroad for \$5 per thousand feet. This gave him a stumpage, or money return on his standing timber, of \$7 per thousand. The prevailing price in the region for "run-of-the-woods" stumpage was \$3 to \$3.50 per thousand feet, and this was all he would have received if he had sold his timber as many of his neighbors were selling theirs.

When Mr. White's job was finished, although he had cut 100,000 board feet of logs from 60 acres, a passer-by would scarcely have noticed any marked change in the appearance of the woods. The smaller and thriftier growing trees had been left. In the ordinary method of sale these trees would practically have been given to the buyer. Mr. White's woods were left in good shape in another way, as he worked up the tree tops into firewood.

On the adjoining tract, the farm owner sold his timber by the "lot" or "boundary" without restriction, and the land was skinned so that there was no hope of another cut for several decades.

CAN NOT MAKE LIVING WITHOUT WOODLAND

From his pine-woodland tract of 12 acres a farmer of Grant County, Ark., during the past 13 years, has cut timber products for home use and for sale amounting in value to \$1,152. In his cutting operations care was taken to save all the young trees from injury.

The experience of the farmer was reported by C. F. Lund, former county agent.

A few years ago, according to the report, C. L. Glover, a farmer, was offered \$40 for all his timber over 12 inches in diameter, or \$1 a thousand feet on the buyer's estimate of 40,000 feet of timber. This discouragingly low offer set Mr. Glover to thinking. He later said to Mr. Lund, "Rather than give my timber away, I have decided to work it out as needed on the place." Soon after this incident he sold \$300 worth of high-grade saw logs, and a little later 22 cords of cotton-gin wood at \$2.25 a cord. In addition to this timber he has cut 250 cords of firewood for himself and his tenants which he values at \$2.25 per cord. Also, in order to provide himself with first-grade pine lumber for barns, sheds, and tenant houses, he has cut 20,000 feet of saw logs worth \$12 per thousand. In taking out these products care has been exercised to save young growing trees to make up the next crop of timber.

Mr. Glover stated that his tract of 12 acres is bringing in about \$40 a year. In going over his woodland Mr. Glover counted 15 virgin pine trees which he called his "board" trees, as he intends to use them as needed for lumber. Under the direction of the county agent, Mr. Glover is managing his woods according to the best farm-woodland practices. In commenting on his new timber work Mr. Glover said:

Our timber has been one of the most neglected crops, and yet if it is given proper attention it is one that will pay best. If we expect to realize profits from our timber, we need much more system in this line of farming.

FORMER GULLIED FIELD NOW VALUABLE TIMBERLAND

Jacob Tickle, a farmer living near Elon College, Alamance County, N. C., is now harvesting lumber and other timber products from trees which he planted with his own hands in a worn-out and gullied field. Mr. Tickle believes in improving rather than wearing out his property. He said:

A little more than 40 years ago I settled on this place to make a living for myself and family. The farm had been abused and was badly washed and gullied. One field of 14 acres was in such bad condition that it was impossible for me to use it in planting. It was so poor that the former owner asked the tax assessor to relieve him of that part of his farm because it would not sell for the amount of the annual tax.

I decided to reclaim this field with pines. At that time there were few pines growing in this section of Alamance County, so I went into another community and dug a quantity of pine seedlings to plant in this field. Some of the seedlings I planted around among the gullies. On about half the area I planted the trees in rows, somewhat like an orchard is set, with the pines about 28 to 30 feet apart. I started this planting in 1887 and added a little each winter until the whole 14 acres were well covered. After these scattered plantings grew large enough to make seed, the whole field was soon seeded to a thick stand. To-day this field of waste land is as valuable, acre for acre, as any field on my farm.

Mr. Tickle stated that folks would hardly believe him when he told them in 1918, at which time his trees were but 30 years old, that he had cut enough lumber from the field to erect several necessary buildings on his farm and furnish all his fuel wood.

MY CROP OF TIMBER

A FARMER IN THE UPPER PIEDMONT REGION FINDS OUT FOR HIMSELF HOW MUCH MONEY HIS TIMBER IS MAKING

E. A. Spainhour, a farmer of Burke County, N. C., wrote a few years ago:

I do not pretend to know much about forestry work, but parties were trying to buy land in this section of the State, and I wanted to know what the stands of young timber were worth before I pruned my land to anybody.

I selected an average acre of young shortleaf yellow pines for cutting. The land where this forest was growing is ordinary high-up land of the Cecil red-soil variety. It had been under cultivation or in orchard up to 30 years ago, when it was turned into pasture.

Twenty-five years ago the area was reseeded with young pines. Within the area I recently laid out three-fourths of an acre and cut the timber. The total amount cut and sold from this three-fourths of an acre was 30 cords, or the equivalent of 40 cords to the acre. It cost me \$1.25 per cord to get the wood cut and \$1.25 per cord to get it hauled to market, so that selling at \$5 per cord in town I had a clear profit of \$75, or at the rate of \$100 per acre, and I still own the land.

This timber was 25 years of age and averaged a growth of 1½ cords per acre per year. This amounted to an average net yearly return from the timber of \$4 per acre. In addition to this the labor in the community received \$4 per acre per year. This makes the total money value of the timber growth \$8 per acre per year.

Average rate of growth or production per acre per year was 1½ cords.

Average gross money returns per acre per year \$8.

Average net return per acre per year \$4.

This is not a bad showing for ordinary land when one considers that the trees established themselves naturally. I was not out a cent for seed or labor to grow the crop. My trees are worth protecting from forest fires.



FIGURE 5.—Cutting pulpwood from trees taken in thinning his woods helped Boly Turner of Arkansas to add to his farm income and improve his timber stands. The land is not being cut clean, as might appear. The trees have been judged and only those marked with a blaze are being cut.

FARMER FINDS "WASTE" TIMBER PROFITABLE

Boly Turner, a farmer living close to Hermitage, Bradley County, Ark., made \$23.20 from three-fourths of an acre of "waste" timber he had considered valueless. Altogether, Mr. Turner had about 80 acres of good second-growth pine timber which he had considered of little value and not worth working up into billets or logs. Timber prices in his community were not attractive, so Mr. Turner had not tried to sell, preferring to let his timber stand and grow with the idea that some day it would be larger and more valuable and perhaps would do some of his children some good.

Passing by Mr. Turner's place one day, County Agent C. S. Johnson saw the good looking old-field pine timber and had a talk with Mr. Turner regarding its value and possibilities. The county agent suggested thinning the more crowded stands and working into pulpwood the trees taken out. He stated that this operation would increase the growth of the trees left and enable the owner to make a profit from the smaller timber which was now being killed out and going to waste. This plan appealed to Mr. Turner, and he decided to thin out an acre as a demonstration. (Figure 5.)

Following out the instructions given him, Mr. Turner cut $6\frac{1}{2}$ cords of pulpwood from about three-fourths of the acre and then decided to quit until he found out if it were going to pay. Another farmer in the community agreed to cut $4\frac{1}{2}$ cords of his timber into pulpwood so that they would have enough for a carload for ship-



F-230222

FIGURE 6.—This young slash pine, averaging over 17 years of age, netted the owner \$5.66 per acre

ment to a paper mill in the next county. They loaded the wood on a car just below Mr. Turner's place, and it was shipped. Mr. Turner's $6\frac{1}{2}$ cords netted him \$3.57 per cord or a total of \$23.20. He says this wood was not more than three-fourths of the timber marked to be cut.

At the price received, Mr. Turner said he could cut and load his wood at a profit, to say nothing of the increased growth he will get on the remaining stand as a result of the improvement cutting.

SLASH PINE IS PROFITABLE

IN GEORGIA

J. A. Crowmartie, Hazellhurst, Ga., finds profit in growing slash pine. In the spring of 1913, Mr. Crowmartie cut the timber off one of his pieces of land and left three tall original pines per acre as seed trees. These completely reseeded the tract of about 8 acres, and the young growth got to be 14 years of age.

Because the land is near town and is valuable for building lots, the owner is turpentineing the trees. (Fig. 6.) There are 309 cups for which he received 15 cents each, or \$46.35 per acre. The lease is to run for three years. This amount is the return for a total of 17 years of the growth of the stand. There are 20 cords of wood per acre at the present time that will net the owner \$2.50 each, or \$50. The returns already in hand and those which appear certain amount to \$96.35, which is an average, over 17 years, of \$5.67 return per acre yearly.

"Timber is the greatest investment I know of," said Mr. Crowmartie. Another significant statement of his is:

I've got slash pine timber I've worked for turpentine steady for 27 years. The Herrington farm near here has worked 200 acres of pine in turpentine for about 25 years—there has been no fire on either tract in that time.

IN MISSISSIPPI

An example of the gross return that may be obtained from a volunteer crop of slash pines on an old field is given by Z. W. Zink, a farmer, and former manager of the local farm bureau of Pascagoula, Jackson County.

The tract of land of about $1\frac{1}{4}$ acres was last cropped in 1905. In 1925, Mr. Zink sold all the merchantable pine on the old field for \$2.50 per cord in the tree or on the stump. The purchaser cut 42 cords on the tract which he afterwards sold to a paper company located in the same county. Thus in a period of 21 years the land had yielded the owner a gross income of \$105 or a yearly average of about \$5 per acre. The only money outlay had been for taxes, about 15 cents yearly, or a total of \$3.15.

IN LOUISIANA

Henry Keller of LaCombe, St. Tammany Parish, La., cut 18 cords of fuel wood from one-third of an acre on his farm. These trees were slash pine 20 years old. The local stumpage, or value on the stump, was 50 cents per cord. It cost \$2 per cord to cut and haul the wood, and the wood sold at the brick kiln in Slidell, La., for \$3.50 a cord. The amount received for the wood delivered was \$63. Figured on a per acre basis, the stand yielded at the rate of 54 cords per acre, or an average rate of growth of slightly over $2\frac{1}{2}$ cords per acre per year. At 50 cents stumpage this means a money return in stumpage of \$1.25 yearly; in labor for cutting and hauling, \$5; and in clear profit on the transaction, \$2.50; or a total of \$8.75 yearly. The farmer harvests his cotton, corn, and potatoes, and so far as possible should harvest his timber products.

LOBLOLLY PINE—A GOOD INVESTMENT

THINNING PINES IN EASTERN VIRGINIA

The pamphlets received have been of interest to me and some assistance in caring for a considerable acreage of loblolly pine. I have taken out systematically each year all the trees that were crowding and have also taken out all the crooked and worthless trees of every variety, and have protected the whole from fire. The pine has made wonderful growth, and it is a real pleasure to watch it. I have gotten enough profit out of the piling from trees that were crowding to pay carrying charges on the whole, and I think I can continue to do so. (From a letter written by R. E. Thrasher, Norfolk, Va.)

THINNING PINES IN MARYLAND

A 5-acre field of 15-year-old loblolly pine on a Maryland farm recently gave to the owner a net profit of \$24.18 from thinnings. The trees were 3 to 7 inches in diameter, and 12 to 25 feet high. The thinnings gave 5 cords of firewood per acre. This sold for \$3 a cord.

The returns, expenses, and profit on the operation of cutting and marketing the 5-acre stand of pines are as follows:

Receipts:		
25 cords wood, at \$3-----		\$75.00
Expenses:		
Cutting and sawing, 138 hours, at 25¢-----	\$34.50	
Hauling, $\frac{3}{4}$ mile, 30 hours, at 50¢-----	15.00	
Gasoline, 6 gallons, at 22¢-----	1.32	
Total-----		50.82
Profit-----		24.18



F-220001

FIGURE 7.—Frank Outland, of Northampton County, N. C., gathers valuable woods straw and leaf mold for use and for sale, and cuts fuel wood and saw timber from these woods

The remaining stand is composed of thrifty, fast-growing, high-quality trees that can be thinned again in 15 years or less for poles or small saw timber.

PINE STRAW—A COMMERCIAL PRODUCT

A. B. Williams, Wade, N. C., makes a regular income selling pine straw (leaves or needles) from his 10-acre patch of pines. He sells the straw on the ground at the rate of 25 cents per cartload. As an acre produces three to five loads his net income is from 75 cents to \$1.25 per acre yearly. A farmer near Fayetteville, N. C., makes his chief living from raking his pine straw and selling it in town for \$3 a load. In the strawberry sections of the South, pine straw unraked on the ground brings from \$2 per acre in North Carolina (fig. 7) to \$5 in Mississippi.

The value of pine straw for growth of trees is shown by a study made in Maryland.¹ A farmer living in eastern Maryland, for years has raked the straw from a certain part of his loblolly (old-field) pine woods. A careful measurement of the growth of the trees on the raked land and of the trees on an adjacent unraked part of the stand showed that the trees where the straw had not been raked had grown 6,200 board feet more of saw timber. This additional growth was worth \$62. Thus the straw on the ground had added over \$1 per acre per year in value to his income. However, it would have yielded him more if it had been raked and sold for truck crops. On sandy land the loss of the woods leaves is not detrimental to tree growth as it is on clay soils.

**FARMER WATCHES
SAPLINGS GROW
AND REFUSES
\$300 AN ACRE**

As a boy, Peyton Williams, of Collins, Tattnall County, Ga., noticed on the farm an abandoned cotton field covered with little longleaf pines. Others regarded them as mere bushes, but he kept fires out and let the trees have a chance to grow. As a man past middle life he looked with keen pride upon his farm-timber crop as a bank account and

better than a life insurance. Repeatedly he refused to sell his stand of tall straight longleaf pine trees for which timber buyers offered him what neighbors considered fabulous prices. The trees had grown close together, resulting in very straight trunks with little taper—just the kind in demand for piling at Savannah, the nearest port, and all along the seacoast as far as New York. Also for railroad construction such trees were sought far and near.



FIGURE 8.—A valuable crop of longleaf pines in Tattnall County, Ga., grown on an old field during the life of the owner

¹ COPE, J. A. LOBLOLLY PINE IN MARYLAND. "A HANDBOOK FOR GROWERS AND USERS." 96 p., illus. Baltimore. 1923.

At the time the photograph, shown as Figure 8, was taken the stand was 70 years old and scaled 30,000 board feet per acre. Almost any day local buyers would have given the owner \$75 per acre for the turpentine rights and \$225 for the timber, or a total of \$300 per acre. The stand had grown an average of 400 board feet per acre yearly during the 70-year period of its life, and the trees had made an average yearly increase in value of about \$4.25 per acre.

CROPPING FARM TIMBER IN TEXAS

An example of the possibilities of timber as a crop is the case of C. C. Crews, who owns a 2,200 acre farm in Gregg County, Tex. Of this farm 1,424 acres is in timber, chiefly pine. After purchasing this place, Doctor Crews had the timber estimated and then sold all marketable timber over 10 inches in diameter. The income from



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FIGURE 9.—Planted slash pine, row 4 years old and 7 to 9 feet high, on land of James Fowler, of Soperton, Ga.

this timber sale was sufficient to pay the purchase price of the entire farm, with a balance which, invested at 7 per cent, returns sufficient interest to meet all taxes on the farm. A good stand of thrifty young timber remains that can be cut over again in 10 years with improvement to the stand and the promise of a good profit.

A PIONEER TIMBER FARMER

Because James Fowler, farm owner of Soperton, Treutlen County, in southeast Georgia, was spending time and money planting pine trees around his farm and protecting his woods from fire, his neighbors a few years ago thought he was a fit candidate for the "bug-house." To-day they are asking his advice.

Mr. Fowler has demonstrated the value of a well-managed and well-protected farm woodland. By putting his low-grade land to work growing timber, he converted his farm from a losing proposition to a paying one. As a result, he has become one of the most enthusiastic advocates of forestry in his section of Georgia.

In response to questions, Mr. Fowler tells his own experience:

In February, 1926, I put out 10 acres of slash pine seedlings which I pulled from near-by woods. These seedlings were 2 years old and averaged 15 inches in height. They were set out in rows checked off 10 feet each way, and 86 per cent of these trees lived and began growing from the start. (Fig. 9.)

I had planned to set out several more acres of pines at this time. But the majority of my friends and neighbors promptly decided that I had lost my mind and should be sent to the asylum. They said anybody ought to know it would be a hundred years before these pines would be big enough for stove wood. I went ahead planting my 10 acres and made plans for other planting later, if this 10 acres didn't land me in the bughouse.

I was so well pleased with the growth of the 10 acres put out in 1926 that I put out, in February, 1927, 130 acres of 1 and 2 year old seedlings. These I secured from the woods and old fields near my farm. I checked these off in straight rows of 460 trees to the acre.

Early in the game Mr. Fowler realized the necessity of fire protection, and set about finding the best way of accomplishing it. He said:

In the late fall of 1923 fire crossed from near-by woods and burned part of the trees I had planted in the spring. In order to protect these trees from other fires, I plowed clean breaks 10 feet wide all around these trees. The result was no more fires. I found the following spring that I had without knowing it prepared some good seed beds by plowing these fire lines and also caused good natural seeding.

In the spring of 1927 I looked over the first plowed and burned fire lanes I had seen. I was so impressed with this disk plow and traetor work that I bought a tractor and side disk plow immediately and began plowing the woods two furrows 25 to 30 feet apart and burning between these lines. I find that plowing the lanes clean will give more natural seeding, but this method is more expensive than plowing each side and burning between the lines. If the grass in the woods is very heavy it is difficult to plow clean, and if the lanes are not plowed very clean fire will cross them in dry and windy weather. I found that on account of the custom of burning these woods each spring, in order to make it more diffieult to burn, I had to cut this land up into 10 or



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FIGURE 10.—Longleaf pine saplings growing vigorously because of protection from fire. James Fowler, a farmer of south Georgia, is locally a pioneer in protecting and growing trees as a farm crop

15 acre tracts, with primary lanes 50 feet wide and secondary lanes not less than 25 feet wide. Cutting this up into smaller tracts is much more expensive. But, I hope to make these tracts much larger just as soon as the people who own the cattle and adjoining lands see the increased benefits to be derived from grazing cattle and growing timber when the woods are left unburned.

I believe that growing and protecting pine trees has been a good investment for me, for at least two reasons: First, I have a few thousand acres of the prettiest young pine trees anywhere in my part of the State (fig. 10) to draw on for future naval-stores production; second, by the interest I have shown in forestry work I have been able against the strongest competition imaginable to buy turpentine timber in my section, in many instances, at a lower price than my competitors. The landowners knew and appreciated the interest I had taken in forestry and felt that I would take care of their timber.

I had nothing but knocks and discouragements when I first began planting and protecting my pine trees, but, now it is quite different. My neighbors,



FIGURE 11.—The five short logs or veneer blocks on which the farmer lost \$27 because of lack of information and carelessness in marketing. Discouraged by this loss, he let the other four blocks go to waste in the woods. His total loss on the nine blocks was \$61.66

who ridiculed me most at the start, often call on me to go out and show them just how thick to leave their stand of young trees in order to get the quickest growth, and how burning through their woods after a rain will injure their young trees. It doesn't take me long as a rule to convince other farmers that preventing fires on their lands means far more money in their pockets than burning even under control.

A COSTLY MISTAKE IN MARKETING FARM TIMBER

An illustration of the money loss sustained by a farmer because of lack of information and carelessness may be of interest by way of contrast.

A farmer living in Gregg County, Tex., felled a huge sweetgum tree measuring $4\frac{1}{2}$ feet on the stump. He sawed the tree into 9 short logs, or veneer blocks, each 4 feet long. Instead of hauling his product to market, a veneer basket factory at the county seat, he left the timber lying in the woods for several weeks in hot weather.

Later, he started hauling the blocks to the factory, beginning with the stump cut, and hauled five of them before asking for a scale and

payment. The inspection showed that the thick sapwood had become dry-rotted and was worthless. The report of the inspector was sickening news. Instead of the five blocks scaling 2,105 board feet they contained only 980 feet of sound usable timber. (Fig. 11.) The farmer's carelessness and delay in marketing had caused a loss in scale of 1,125 board feet. The factory was giving \$24 per thousand feet for large-sized clear timber. His check, instead of reading \$50.52, was written in the sum of \$23.52—a dead loss of \$27.

The farmer's journey home was a long and sad one for he needed every cent he could get for his family.

But this is not the end of the story of how a well-intentioned but careless farmer marketed his prize tree. The other four blocks in the woods were never moved from their bedding place where they fell beside the creek. These great blocks scaled a total of 1,444 board feet and if they had been delivered to the plant soon after being cut would have brought \$34.66. Here was the second dead money loss to the farmer.

How much did the farmer lose altogether? For the nine veneer blocks from this monarch of the forest, if delivered in good condition to the factory, the farmer would have received \$85.18. Because of his lack of information and carelessness in handling this one tree he lost the neat sum of \$61.66.

PINE POLES FROM A POTATO PATCH A GOLD MINE TO JOE MILLER

Joe Miller and his wife Louisa have lived for many years on a small farm in the midst of the great cut-over and burned-over section in south Mississippi. Joe's place can be plainly seen lying about a "quarter" back from the graveled country road that leads to the little town of Howison in Harrison County on the Gulf & Ship Island Railroad. The place is marked by live oaks about the weatherworn house and outbuildings. Until the summer of 1927, the place was also marked by a patch of pine "saplings" standing out from bare acres dotted with a cabbage-topped longleaf pine here and there, veterans of logging days.

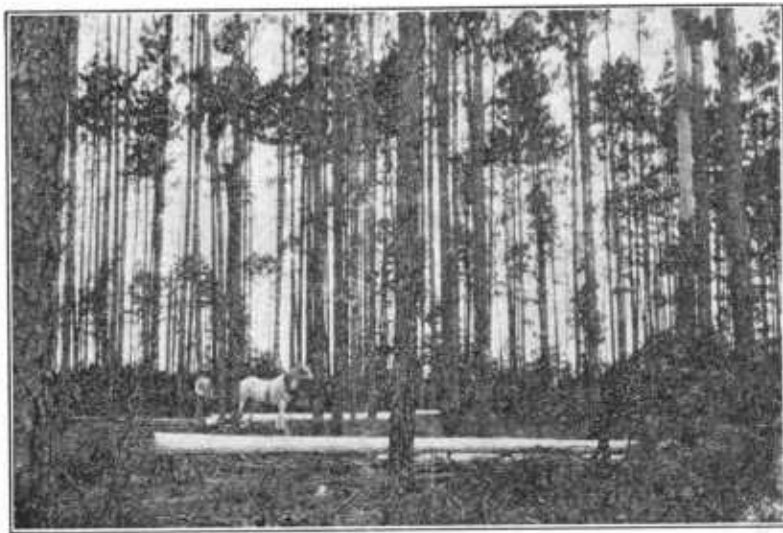
Joe drifted into south Mississippi from Nebraska some 40 years ago and got a job as a hired man on the farm of John B. Evans, a pioneer, whose daughter, Louisa, Joe married within a year. At that time the Evans farm was a clearing in the great forest of giant longleaf pines, and beyond the barn and garden there was an old field 2 acres in area, which had been "turned out" 10 years before and was thickly studded with sturdy little longleaf pines 6 to 8 feet in height. By the time that Louisa inherited the farm the pines had become a sapling thicket, and the forest beyond had been logged off.

Joe had brought some appreciation of the value of trees from Nebraska, where "trees is trees," and where "if a man cut or even injured a tree it was necessary for him to give a mighty good account of himself." Therefore when Joe's neighbors in a friendly spirit advised him to cut and burn his saplings in order to avoid the State tax on growing timber, he refused their advice and protected his thicket while his neighbors were cutting and burning theirs.

In the thicket of pines there were more than a thousand tall, straight, clean trees. Many of them now were good-sized thrifty

trees from 12 to 15 inches on the stump, many others were 9 to 12 inches, and a number of suppressed, or slow-growing trees with close rings of dense wood, were from 6 to 9 inches in diameter. The trees had grown to be 70 to 80 feet in height and of ideal form and size for poles. (Fig. 12.)

Appreciating his trees as he did, he yet knew little about their money value, and when a buyer in the spring of 1927 offered \$600 for the trees found fit to be cut for poles, he was satisfied and accepted the offer. Practically every tree cut two poles. The larger



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FIGURE 12.—The pine "saplin thicket" of 2 acres which proved to be a \$600 gold mine to Joe Miller. About one-half of the trees have been cut and the others will follow them to the pole yard to be treated and shipped perhaps 1,000 miles to some of the Northern States

trees each yielded a class A pole worth on the stump from \$3 to \$5 and a class C or D pole worth from \$1 to \$3.

Six hundred dollars was more money than either Joe Miller or his wife had seen at any one time in many years. As a matter of fact, however, Joe sold his timber for about one-half of its real value. A local timberman was heard questioning the purchaser when he had cut just about one-half of the trees, and the answer was also overheard: "I've already made over and above what they cost me." Instead of the \$600 received for it, Joe Miller's timber was actually worth on the stump from \$1,000 to \$1,200.

Joe and Louisa Miller's thicket of pines, a volunteer crop on the old abandoned potato patch which had grown up untended except for some degree of fire protection and with no expense for labor or fertilizer, had yielded a money income almost entirely net profit. The timber crop when sold brought them in an average yearly income of \$5 an acre. Five years before the time of selling, the trees had little value.

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